nections. In addition, the transmitting term may also refer to a storage of information to one or more caches or memories of the underlying device, remote device, components, subcomponents, or processing hardware element and a provision to or request by, availability to, and/or acquiring of the stored information by another device, component, subcomponent, or processing hardware element from such one or more memories.

[0129] The electronic device **900** may be a mobile terminal and/or wearable device. Such a mobile terminal or wearable device has user input and output hardware in the UI **940**, representative of a microphone, display/touch screen, physical buttons, speaker, vibration motor, camera, e.g., intercoupled via a communication bus to one or more processors of the electronic device **900** and a memory, such as memory **960**. The disclosed speech recognition and model training features of FIGS. **1-8** may also be especially useful in wearable devices which generally do not have physical keyboards and only limited display area for user text/command entry, though embodiments may alternatively exist where the UI **940** includes such a physical keyboard and display(s). Upon recognizing a user's speech, the processor **930** of the electronic device **900** may effectuate commands (such as "text Frank", "what is the weather?", "capture image," "start recording", and the like) responsive to the recognized speech and/or may transcribe the recognized text to facilitate communications such as text messages, emails, various instant messengers, and the like.

[0130] Thus, as a non-exhaustive example only, the electronic device **900** as described herein may be a mobile device, such as a cellular phone, a smart phone, a wearable smart device (such as a ring, a watch, a pair of glasses, a healthcare device, a bracelet, an ankle bracelet, a belt, a necklace, an earring, a headband, a helmet, or a device embedded in clothing), a portable personal computer (PC) (such as a laptop, a notebook, a subnotebook, a netbook, or an ultra-mobile PC (UMPC), a tablet PC (tablet), a phablet, a personal digital assistant (PDA), a digital camera, a portable game console, an MP3 player, a portable/personal multimedia player (PMP), a handheld e-book, a global positioning system (GPS) navigation device, other healthcare device, a mobile robot, a vehicle electronic device, user interface, or controller, or a sensor, or a stationary device, such as a desktop PC, a high-definition television (HDTV), a DVD player, a Blu-ray player, a set-top box, or a home appliance, or any other mobile or stationary device configured to perform wireless or network communication. In one example, a wearable device is a device that is designed to be mountable directly on the body of the user, such as a pair of glasses or a bracelet. In another example, a wearable device is any device that is mounted on the body of the user using an attaching device, such as a smart phone or a tablet attached to the arm of a user using an armband, or hung around the neck of the user using a lanyard.

[0131] Still further, the memory **960** may be used to store one or more generated acoustic and/or language models to be used by the speech recognizer **920**. The speech recognizer **920** may further be configured to generate an acoustic model such as described above with regard to FIGS. **6-8**. The memory **960** is a non-transitory medium that may store executable instructions to implement any of the above speech recognition and/or acoustic model generation discussed herein with regard to FIGS. **1-8**. In addition, the memory **960** may also be representative, or be used corresponding to the same discussion, the caches **240** and **640** of FIGS. **2** and **6**, for example.

[0132] Accordingly, the acoustic score calculator **110**, language score calculator **120**, decoder **130**, speech input section **210**, preprocessor **220**, score calculator **230**, frame set extractor **610**, training data generator **620**, model trainer **630**, speech input section **910**, speech recognizer **920**, processor **930**, locator **970**, user interface **940**, transceiver **950**, and memory **960** in FIGS. **1**, **2**, **6**, and **9** that perform the operations described in this application are implemented by hardware components configured to perform the operations described in this application that are performed by the hardware components. Examples of hardware components that may be used to perform the operations described in this application where appropriate include controllers, sensors, generators, drivers, memories, comparators, arithmetic logic units, adders, subtractors, multipliers, dividers, integrators, and any other electronic components configured to perform the operations described in this application. In other examples, one or more of the hardware components that perform the operations described in this application are implemented by computing hardware, for example, by one or more processors or computers. A processor or computer may be implemented by one or more processing elements, such as an array of logic gates, a controller and an arithmetic logic unit, a digital signal processor, a microcomputer, a programmable logic controller, a field-programmable gate array, a programmable logic array, a microprocessor, or any other device or combination of devices that is configured to respond to and execute instructions in a defined manner to achieve a desired result. In one example, a processor or computer includes, or is connected to, one or more memories storing instructions or software that are executed by the processor or computer. Hardware components implemented by a processor or computer may execute instructions or software, such as an operating system (OS) and one or more software applications that run on the OS, to perform the operations described in this application. The hardware components may also access, manipulate, process, create, and store data in response to execution of the instructions or software. For simplicity, the singular term "processor" or "computer" may be used in the description of the examples described in this application, but in other examples multiple processors or computers may be used, or a processor or computer may include multiple processing elements, or multiple types of processing elements, or both. For example, a single hardware component or two or more hardware components may be implemented by a single processor, or two or more processors, or a processor and a controller. One or more hardware components may be implemented by one or more processors, or a processor and a controller, and one or more other hardware components may be implemented by one or more other processors, or another processor and another controller. One or more processors, or a processor and a controller, may implement a single hardware component, or two or more hardware components. A hardware component may have any one or more of different processing configurations, examples of which include a single processor, independent processors, parallel processors, single-instruction single-data (SISD) multiprocessing, single-instruction multiple-data (SIMD) multiprocessing,